

Amendments to the Specification

Please replace paragraph [0022] with the following amended paragraph:

The optical assembly 10 provides a laser diode 101, a photodiode 102, a heater 103 and a thermistor 104. The photodiode 102 monitors an optical output power of the laser diode, while ~~thermister~~ thermistor 104 monitors a temperature of a region where the laser diode is installed. A temperature of the optical assembly 10 is controlled by the TEC 11. The TEC is driven by the TEC driver 23 and its condition, such as a supply current, is monitored by the TEC monitor 23 for prevent the TEC from being out of control.

Please replace paragraph [0027] with the following amended paragraph:

Transistors 203 and 204, when the comparator 208 output the switching signal transmit currents generated by respective current source [[222]] 221 and 223, each controlled by the D/A-C 212 and D/A-213, to the differential amplifier 205 and the LD-driver 201. Namely, these transistors 202 and 203 work as a normally open switch opposite to the operation of the transistor 201. When the external data, which indicates the sensed temperature of the optical assembly, is within the first reference data +/-the second reference data, the LD-driver 201 starts to drive the laser diode 101.

Please replace paragraph [0028] with the following amended paragraph:

Next, an operation of the semiconductor laser module 1 will be described. FIG. 2 shows a flow chart to explain operational steps of the laser module 1. When a power supply of the laser module 1 puts on, the comparator 208 does not output the switching signal to the transistor 202 because the temperature of the optical assembly, which is detected by the ~~thermister~~ thermistor

104, is below the lower limit. The lower limit corresponds to the value of the first reference data—the second reference data. Since the transistor 202 is a normally close switch, the current is supplied to the heater 103. In the case that the performance of the heater 103, especially the heat-generating characteristic thereof, is set to those similar to the laser diode 101 under consideration, a thermal condition of the optical assembly 10 may be simulated as the normal operating condition of the semiconductor laser module 1 when the laser diode is driven. On the other hand, the TEC driver 23 may drive the TEC 11 independently on the heater 103, thereby bringing the temperature of the optical assembly 10 close to or within the predetermined range (step S01).

Please replace paragraph [0029] with the following amended paragraph:

The driving signal based on the first reference data provided from the CPU 206 and the external data sensed by the ~~thermister~~ thermistor 104 is output to the TEC driver 23. The TEC driver 23 feedback controls the TEC 11 by the driving signal so as to stabilize the temperature of the optical assembly 10 close to the temperature corresponding to the first reference data (step S02).

Please replace paragraph [0035] with the following amended paragraph:

FIG. 3B shows still another modified arrangement of an optical assembly 10b according to the present invention. The optical assembly 10b provides the laser diode, the photo diode 102, the heater 103 and the ~~thermister~~ thermistor 104. An amplifier 31 having a differential output is arranged out of the optical assembly 10b and the amplifier 31 drives the optical assembly 10b. An anti-phase output of the amplifier 31 is conducted to the terminal 113, which is connected to

the one terminal of the heater 103. During the temperature of the optical assembly 10b is out of the preset range, the amplifier 31 receives a signal with a high level and the anti-phase output thereof is set to be a low level. Therefore, the supply current flows from the terminal 111 to the terminal 113 through the heater 103. When the temperature of the optical assembly 10b falls within the preset range, the input signal to the amplifier 31 changes to the practical driving signal of the laser diode, which involves high-frequency components. The signal input to the amplifier 31 drives not only the laser diode 101 but also the heater 103. However, the total amount of the heat generation by the laser diode and the heater is unvaried because the power consumption by the driving signal, which is an alternating signal, is nearly half when the heater is driven by a direct current.